Amendments to the Claims:

The following claims will replace all prior versions of the claims in this application (in the unlikely event that no claims follow herein, the previously pending claims will remain):

1. (Previously Presented) A QAM (Quadrature Amplitude Modulation) transmitting apparatus having a multiplicity of transmission bands with variable transmission rates, comprising:

TC (Transmission Convergence) sub-layer means for performing frame processing and error correction for TX (transmitting) data;

band splitting means for distributing the TX data preprocessed by the TC sub-layer means to a predetermined number of band TX processing means;

the predetermined number of band TX processing means for symbol-encoding the output data of the band splitting means, pulse-shaping and interpolating the symbol-encoded data, and converting the interpolated TX data to a passband signal;

synthesizing means for synthesizing the passband signal outputted from the predetermined number of the band TX processing means; and

digital-to-analog converting and outputting means for converting the synthesized digital TX data to an analog synthesized TX signal to output~~.~~,

wherein the band splitting means distributes the TX data to each of the predetermined number of band TX processing means based on predetermined and different data transmission rates.

2. (Previously Presented) The QAM transmitting apparatus as recited in claim 1, wherein a data transmission rate of the TC sub-layer means is equal to a sum of data transmission rates of each of the predetermined number of band TX processing means.

3. (Cancelled)

4. (Previously Presented) The QAM transmitting apparatus as recited in claim 1, wherein the band splitting means distributes the TX data to each of the predetermined number of band TX processing means in units of bytes.

5. (Previously Presented) The QAM transmitting apparatus as recited in claim 1, wherein the predetermined number of band TX processing means encodes the TX data in units of bytes.

6. (Previously Presented) A QAM (Quadrature Amplitude Modulation) receiving apparatus having a multiplicity of transmission bands with variable transmission rates, comprising:

analog-to-digital converting means for converting an analog signal received through a transmission line to a digital RX (receiving) signal;

band distributing means for distributing the digital RX signal to a predetermined number of band RX processing means;

the predetermined number of band RX processing means for converting the RX signal distributed from the band distributing means to a baseband signal, compensating signal distortion of the baseband signal caused by the transmission line, and converting the compensated RX signal by QAM-decoding to a symbol;

band multiplexing means for multiplexing the output data from the predetermined number of band RX processing means; and

TC (Transmission Convergence) sub-layer means for performing frame processing and error correction for the multiplexed RX data from the predetermined number of band multiplexing means,

wherein the band multiplexing means multiplexes the RX data from each of the predetermined number of band RX processing means based on predetermined and different data transmission rates.

7. (Cancelled)

8. (Previously Presented) The QAM receiving apparatus as recited in claim 6, wherein the band multiplexing means distributes the RX data to the TC sub-layer means in units of bytes.

9. (Previously Presented) The QAM receiving apparatus as recited in claim 6, wherein the predetermined number of band RX processing means encodes the RX data in units of bytes.

10. (Previously Presented) A QAM (Quadrature Amplitude Modulation) transmitting apparatus having a multiplicity of transmission bands with variable transmission rates, comprising:

at least one TC (Transmission Convergence) sub-layer for performing frame processing and error correction for TX (transmitting) data;

at least one band splitter for distributing the TX data preprocessed by the TC sub-layer to a predetermined number of band TX processors;

the predetermined number of band TX processors for symbol-encoding the output data of the band splitter, pulse-shaping and interpolating the symbol-encoded data, and converting the interpolated TX data to a passband signal;

at least one synthesizer for synthesizing the passband signal outputted from the predetermined number of the band TX processors; and

at least one digital-to-analog converter for converting the synthesized digital TX data to an analog synthesized TX signal to output,

wherein the band splitter distributes the TX data to each of the predetermined number of band TX processors based on predetermined and different data transmission rates.

11. (Previously Presented) The QAM transmitting apparatus as recited in claim 10, wherein a data transmission rate of the TC sub-layer is equal to a sum of data transmission rates of each of the predetermined number of band TX processors.

12. (Previously Presented) The QAM transmitting apparatus as recited in claim 10, wherein the band splitter distributes the TX data to each of the predetermined number of band TX processors in units of bytes.

13. (Previously Presented) The QAM transmitting apparatus as recited in claim 10, wherein the predetermined number of band TX processors encodes the TX data in units of bytes.

14. (Previously Presented) A QAM (Quadrature Amplitude Modulation) receiving apparatus having a multiplicity of transmission bands with variable transmission rates, comprising:

at least one analog-to-digital converter for converting an analog signal received through a transmission line to a digital RX (receiving) signal;

at least one band distributor for distributing the digital RX signal to a predetermined number of band RX processors;

the predetermined number of band RX processors for converting the RX signal distributed from the band distributor to a baseband signal, compensating signal distortion of the baseband signal caused by the transmission line, and converting the compensated RX signal by QAM-decoding to a symbol;

at least one band multiplexer for multiplexing the output data from the predetermined number of band RX processors; and

at least one TC (Transmission Convergence) sub-layer for performing frame processing and error correction for the multiplexed RX data from the band multiplexor,

wherein the band multiplexor multiplexes the RX data from each of the predetermined number of band RX processors based on predetermined and different data transmission rates.

15. (Previously Presented) The QAM receiving apparatus as recited in claim 14, wherein the band multiplexer distributes the RX data to the TC sub-layer means in units of bytes.

16. (Previously Presented) The QAM receiving apparatus as recited in claim 14, wherein the predetermined number of band RX processors encodes the RX data in units of bytes.